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... The decrypted **TMSI** reveals the **counter** value of the 32-bit **counter**. The **counter** value is then passed to a **hash** function as in step 210, which produces the ...

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FM ANJUM - 2007 - freepatentsonline.com

... the 3G network to ensure the uniqueness of the **TMSI**. ... address, AP_info, COUNTER) [0054] where the **COUNTER** is increased ... value is the calculated 160 bit **hash** value ...

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YY Chen, JK Jan, CL Chen - Computer Networks, 2005 - Elsevier

... physical charge **counter** as with a piped water or electricity **counter**. ... being exposed over the air interface, an encrypted **TMSI** is sent ... a one way **hash** function. ...

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JL MIZELL, DJ LAUSON, M KACZMARSKA - EP Patent 1,461,896, 2004 - freepatentsonline.com

... the decrypted **hash** and the calculated **hash**, and a ... packet temporary mobile subscriber identify (P-TMSI) is assigned ... thereof by GGSN 30, a **counter** is incremented ...

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JL Mizell, M Chiu, M Kaczmarska - 2003 - freepatentsonline.com

... packet temporary mobile subscriber identify (P-TMSI) is assigned ... have a differentiated service(X), a **counter** 400X is ... may be executed to generate a **hash** of the ...

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YF Ko - 2006 - freepatentsonline.com

... connection identifier (VPI, VCI and CID) as a **HASH**. ... and p_TMSI_and_RAI_GSM_MAP (the

call release **counter** is also ... code and p_TMSI and/or TMSI related parameter ...

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[Location Privacy in Bluetooth - all 3 versions »](#)

FL Wong, F Stajano - Proceedings of 2nd European Workshop on Security and Privacy ... - cl.cam.ac.uk

... use of network-issued temporary pseudonyms - the 'TMSI', and ways ... matter of strong privacy policy to **counter** tracking, we ... and I B . H is a **hash** function, R ...

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L Chen, D Gollmann, C Mitchell - Information Security and Privacy, LNCS, 1996 - esat.kuleuven.ac.be

... However, the new **TMSI** is returned after authentication has been completed and a new session key has been generated so that it can be, and is ... a **hash**-function. ...

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AN AUTHENTICATION PROTOCOL FOR MOBILE CELLULAR NETWORK

LA Mohammed, AR Ramli, M Daud, V Prakash - Malaysian Journal of Computer Science, 2002 - mjcs.fsktm.um.edu.my

... of a Temporary Mobile Subscriber Identity (**TMSI**), which is ... drawback of the protocol and some **counter** measures against ... Where h is a one-way **hash** function known ...

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PB Van der Merwe - 2004 - upetd.up.ac.za

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M Pfundstein - US Patent 5,375,251, 1994 - Google Patents

... 1991, US Seiten 50 -54 "Security and Saturation Solutions for GSM" by Delory et ...

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Using SSL/TLS in authentication and key agreement procedures of future mobile networks

G Kambourakis, A Rouskas, S Gritzalis - Mobile and Wireless Communications Network, 2002. 4th ..., 2002 - ieeexplore.ieee.org

... ID it is implied that the parties are going to use **security** parameters agreed ...

option).a p,i', ky i + , (IMSI decryption) V;,R iiy , Generate TMSI i MSCn ...

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Secure generation of temporary mobile station identifiers

RFJR Quick, GG Rose - 2003 - freepatentsonline.com

... 314, VLR 132 encrypts the following to generate a TMSI ... same length of the identifier used by the **TMSI**. Also, to provide further **security**, the ciphering key is ...

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Authentication and Security in Wireless Phones

G Rose - Qualcomm Australia - qualcomm.com.au

... Overview of Authentication and **security** ... **TMSI** - Temporary Mobile Subscriber Identity Page 14. ... CAVE is run to generate CMEAkey (64 bits) ...

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GSM: Security, Services and the SIM - all 3 versions »

K Vedder - State of the Art in Applied Cryptography, Lecture Notes in ... - Springer

... Ciphering key; used in A5 to generate the key ... Module; the subscriber card containing **security** and other ... SIM in the authentication process **TMSI** Temporary Mobile ...

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[PS] Security Aspects of Mobile Communications - all 3 versions »

K Vedder - Computer **Security** and Industrial Cryptography-State of the ... , 1991 -

iaik.tugraz.at

... A3 and A8, which are used to generate SRES and K ... even send its identity in form of the **TMSI** or IMSI ... elds are protected against reading by the **security** level PIN ...

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Variable rate optional **security measures method and apparatus for wireless communications network - all 3 versions »**

M Thomas - US Patent 6,014,558, 2000 - Google Patents

... IMEI Check on revenue generating transactions or ... **TMSI** reallocation is also preferably

applied only when ... Other **security** measures are furtherpossible, for example ...
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Mobility and **security management in the GSM system and someproposed future improvements - all 3 versions »**

A Mehrotra, LS Golding, HNS Inc, MD Germantown - Proceedings of the IEEE, 1998 - ieeexplore.ieee.org

... from the MS to the BSS after reallocation of new **TMSI**. ... MEHROTRA AND GOLDING: MOBILITY

AND **SECURITY** IN THE GSM SYSTEM ... 11 has shown the process of generating . . .

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Radio Access Link **Security for Universal Mobile Telecommunication Systems (UMTS) - all 2 versions »**

T Flanagan, T Coffey, R Dojen - dcs1.ul.ie

... network cannot retrieve the IMSI from the **TMSI** by which ... and is not expected to pose serious **security** problems for ... user and the HE, are used to generate XRES, CK ...

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Security in GSM - all 4 versions »

LI Yong, C Yin, MA Tie-Jun - gsm-security.net

... Algorithm A8 Ciphering Key **Generating** Algorithm AUC ... Number SRES Signed Response **TMSI**

Temporary Mobile ... Institute, Recommendation GSM 02.09, "Security Aspects". ...

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[K Nyberg](#)... values and does not affect system **security** provided that the **hash** function and ...
systems[J Arkko](#)for efficiently maintaining and securely **generating TMSI** assignments ...[L Chen](#)

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[State of the Art on Security Procedures for UMTS](#)

H Shao - referaat.ewi.utwente.nl

... 4. NON 3GPP STANDARDIZED SECURITY PROCEDURES FOR UMTS This ... the AKA
that uses HMAC

(Hash MAC) enhancements ... generate AUTH, the HLR has to generate index numbers ...

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P Yousef - daimi.au.dk

... A8 Encryption key **generating** algorithm A8 ... **TMSI** Temporary Mobile Subscriber
Identity ...**Security** plays a more important part in wireless communication systems than ...

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[\[book\] Information Security Applications: 5th International Workshop, WISA 2004, Jeju Island, Korea, August ... - all 2 versions »](#)

CH Lim, M Yung - 2005 - books.google.com

... 3.1.2 Confidentiality The Encapsulating Security Payload (ESP ... AES [14] in Segmented
Integer Counter (SIC) mode ... encryption scheme used to **generate** the keystream. ...

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[Mobile Terminal Security - all 2 versions »](#)

O Benoit, N Dabbous, L Gauteron, P Girard, H ... - mirror.cr.yp.to

... mobile phone is paged by its **TMSI** to establish ... algorithms are used in which **security**
function. ... overview of the procedure for **generating** authentication vectors ...

Cited by 4 - Related Articles - View as HTML - Web Search

[\[book\] UMTS Security](#)

V Niemi, K Nyberg... - 2003 - books.google.com

... 1 Block ciphers versus **hash** functions 221 ... encrypted **TMSI** Figure 1.3 Identification
and authentication of a user: GSM **security** protocol GSM - Global System for ...

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[BOOK] [Secure communications](#)

RJ Sutton - 2002 - doi.wiley.com

... 5.2.5 The IMSI & **TMSI** ... encrypted ciphertext through the block cipher to generate the key ... National Security Agency (NSA): An agency of the US government that is ...

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[Wireless network security and interworking - all 7 versions »](#)

M Shin, J Ma, A Mishra, WA Arbaugh - Proceedings of the IEEE, 2006 - ieeexplore.ieee.org

... network with its identity, either the IMSI or **TMSI**. ... the USIM should be able to generate the same ... restricted by physical perimeters, a **security** framework must ...

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[Deliverable Number D09 Deliverable Title Detailed technical specification of security](#)

CD Date, AD Date, WP Workpackage - isrc.rhul.ac.uk

... Frame Number HLR Home Location Register HMAC Keyed-Hash Message Authentication ... TDD

Time Division Multiplex TLS Transport Layer Security **TMSI** Temporary Mobile ...

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Relevance scale **1 Undeniable billing in mobile communication** Jianying Zhou, Kwok-Yan LamOctober 1998 **Proceedings of the 4th annual ACM/IEEE international conference on Mobile computing and networking MobiCom '98****Publisher:** ACM PressFull text available:  [pdf\(864.03 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

Keywords: cryptographic protocol, mobile communication security, non-repudiation, undeniable billing

**2 Applications and compliance: Virtual monotonic counters and count-limited objects** **using a TPM without a trusted OS**

Luis F. G. Sarmenta, Marten van Dijk, Charles W. O'Donnell, Jonathan Rhodes, Srinivas Devadas

November 2006 **Proceedings of the first ACM workshop on Scalable trusted computing STC '06****Publisher:** ACM PressFull text available:  [pdf\(447.59 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

A trusted monotonic counter is a valuable primitive that enables a wide variety of highly scalable offline and decentralized applications that would otherwise be prone to replay attacks, including offline payment, e-wallets, virtual trusted storage, and digital rights management (DRM). In this paper, we show how one can implement a very large number of *virtual* monotonic counters on an untrusted machine with a Trusted Platform Module (TPM) or similar device, without relying on a trusted OS ...

Keywords: certified execution, e-wallet memory integrity checking, key delegation, stored-value, trusted storage

**3 Fast hash table lookup using extended bloom filter: an aid to network processing** Haoyu Song, Sarang Dharmapurikar, Jonathan Turner, John LockwoodAugust 2005 **ACM SIGCOMM Computer Communication Review , Proceedings of the 2005 conference on Applications, technologies, architectures, and protocols for computer communications SIGCOMM '05**, Volume 35 Issue 4

Publisher: ACM Press

Full text available:  pdf(338.54 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Hash tables are fundamental components of several network processing algorithms and applications, including route lookup, packet classification, per-flow state management and network monitoring. These applications, which typically occur in the data-path of high-speed routers, must process and forward packets with little or no buffer, making it important to maintain wire-speed throughout. A poorly designed hash table can critically affect the worst-case throughput of an application, since the num ...

Keywords: forwarding, hash table

4 [IP lookup and packet classification: Segmented hash: an efficient hash table implementation for high performance networking subsystems](#)



Sailesh Kumar, Patrick Crowley

October 2005 **Proceedings of the 2005 symposium on Architecture for networking and communications systems ANCS '05**

Publisher: ACM Press

Full text available:  pdf(384.83 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Hash tables provide efficient table implementations, achieving $O(1)$, query, insert and delete operations at low loads. However, at moderate or high loads collisions are quite frequent, resulting in decreased performance. In this paper, we propose the segmented hash table architecture, which ensures constant time hash operations at high loads with high probability. To achieve this, the hash memory is divided into N logical segments so that each incoming key has N potential storage locations; the ...

Keywords: hash table, lookup

5 [Session 7C: Tabulation based 4-universal hashing with applications to second moment estimation](#)



Mikkel Thorup, Yin Zhang

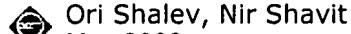
January 2004 **Proceedings of the fifteenth annual ACM-SIAM symposium on Discrete algorithms SODA '04**

Publisher: Society for Industrial and Applied Mathematics

Full text available:  pdf(190.58 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

We show that 4-universal hashing can be implemented efficiently using tabulated 4-universal hashing for characters, gaining a factor of 5 in speed over the fastest existing methods. We also consider generalization to k -universal hashing, and as a prime application, we consider the approximation of the second moment of a data stream.

6 [Split-ordered lists: Lock-free extensible hash tables](#)



Ori Shalev, Nir Shavit

May 2006 **Journal of the ACM (JACM)**, Volume 53 Issue 3

Publisher: ACM Press

Full text available:  pdf(632.56 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We present the first lock-free implementation of an extensible hash table running on current architectures. Our algorithm provides concurrent insert, delete, and find operations with an expected $O(1)$ cost. It consists of very simple code, easily implementable using only load, store, and compare-and-swap operations. The new mathematical structure at the core of our algorithm is *recursive split-ordering*, a way of ordering elements in a linked list so that they can be repeatedly &ldqu ...

Keywords: Concurrent data structures, compare-and-swap, hash table, non-blocking synchronization

7 Split-ordered lists: lock-free extensible hash tables

 Ori Shalev, Nir Shavit

July 2003 **Proceedings of the twenty-second annual symposium on Principles of distributed computing PODC '03**

Publisher: ACM Press

Full text available:  pdf(1.06 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We present the first lock-free implementation of an extensible hash table running on current architectures. It provides concurrent insert, delete, and search operations with an expected $O(1)$ cost. It consists of very simple code, easily implementable using only load, store, and compare-and-swap operations. The new mathematical structure at the core of our algorithm is *recursive split-ordering*, a way of ordering elements in a linked list so that they can be repeatedly "split" using ...

Keywords: Compare-and-Swap, Concurrent Data Structures, Hash Table, Non-blocking Synchronization, Real-Time

8 Survey of network-based defense mechanisms countering the DoS and DDoS

 problems

Tao Peng, Christopher Leckie, Kotagiri Ramamohanarao

April 2007 **ACM Computing Surveys (CSUR)**, Volume 39 Issue 1

Publisher: ACM Press

Full text available:  pdf(1.17 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This article presents a survey of denial of service attacks and the methods that have been proposed for defense against these attacks. In this survey, we analyze the design decisions in the Internet that have created the potential for denial of service attacks. We review the state-of-art mechanisms for defending against denial of service attacks, compare the strengths and weaknesses of each proposal, and discuss potential countermeasures against each defense mechanism. We conclude by highlighting ...

Keywords: Botnet, DDoS, DNS reflector attack, DoS, IP spoofing, IP traceback, IRC, Internet security, SYN flood, VoIP security, bandwidth attack, resource management

9 Efficient identification of hot data for flash memory storage systems

 Jen-Wei Hsieh, Tei-Wei Kuo, Li-Pin Chang

February 2006 **ACM Transactions on Storage (TOS)**, Volume 2 Issue 1.

Publisher: ACM Press

Full text available:  pdf(557.23 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Hot data identification for flash memory storage systems not only imposes great impacts on flash memory garbage collection but also strongly affects the performance of flash memory access and its lifetime (due to wear-leveling). This research proposes a highly efficient method for on-line hot data identification with limited space requirements.

Different from past work, multiple independent hash functions are adopted to reduce the chance of false identification of hot data and to provide predic ...

Keywords: Storage system, flash memory, garbage collection, workload locality

10 New directions in traffic measurement and accounting: Focusing on the elephants,**ignoring the mice**

Cristian Estan, George Varghese

August 2003 **ACM Transactions on Computer Systems (TOCS)**, Volume 21 Issue 3

Publisher: ACM Press

Full text available: [pdf\(1.03 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Accurate network traffic measurement is required for accounting, bandwidth provisioning and detecting DoS attacks. These applications see the traffic as a collection of flows they need to measure. As link speeds and the number of flows increase, keeping a counter for each flow is too expensive (using SRAM) or slow (using DRAM). The current state-of-the-art methods (Cisco's sampled NetFlow), which count periodically sampled packets are slow, inaccurate and resource-intensive. Previous work showed ...

Keywords: Network traffic measurement, identifying large flows, on-line algorithms, scalability, usage based accounting

11 Data streaming algorithms for efficient and accurate estimation of flow size**distribution**

Abhishek Kumar, Minho Sung, Jun (Jim) Xu, Jia Wang

June 2004 **ACM SIGMETRICS Performance Evaluation Review , Proceedings of the joint international conference on Measurement and modeling of computer systems SIGMETRICS '04/Performance '04**, Volume 32 Issue 1

Publisher: ACM Press

Full text available: [pdf\(405.36 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Knowing the distribution of the sizes of traffic flows passing through a network link helps a network operator to characterize network resource usage, infer traffic demands, detect traffic anomalies, and accommodate new traffic demands through better traffic engineering. Previous work on estimating the flow size distribution has been focused on making inferences from sampled network traffic. Its accuracy is limited by the (typically) low sampling rate required to make the sampling operation affo ...

Keywords: data streaming, network measurement, statistical inference, traffic analysis

12 Architecture/power: Reducing energy of virtual cache synonym lookup using bloom**filters**

Dong Hyuk Woo, Mrinmoy Ghosh, Emre Özer, Stuart Biles, Hsien-Hsin S. Lee

October 2006 **Proceedings of the 2006 international conference on Compilers, architecture and synthesis for embedded systems CASES '06**

Publisher: ACM Press

Full text available: [pdf\(232.17 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Virtual caches are employed as L1 caches of both high performance and embedded processors to meet their short latency requirements. However, they also introduce the synonym problem where the same physical cache line can be present at multiple locations in the cache due to their distinct virtual addresses, leading to potential data consistency issues. To guarantee correctness, common hardware solutions either perform serial lookups for all possible synonym locations in the L1 consuming additional ...

Keywords: bloom filter, cache, low power, synonym

13 Data streaming algorithms for accurate and efficient measurement of traffic and flow matrices

Qi (George) Zhao, Abhishek Kumar, Jia Wang, Jun (Jim) Xu
 June 2005 **ACM SIGMETRICS Performance Evaluation Review , Proceedings of the 2005 ACM SIGMETRICS international conference on Measurement and modeling of computer systems SIGMETRICS '05**, Volume 33 Issue 1
 Publisher: ACM Press

Full text available: [pdf\(299.15 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The traffic volume between origin/destination (OD) pairs in a network, known as traffic matrix, is essential for efficient network provisioning and traffic engineering. Existing approaches of estimating the traffic matrix, based on statistical inference and/or packet sampling, usually cannot achieve very high estimation accuracy. In this work, we take a brand new approach in attacking this problem. We propose a novel data streaming algorithm that can process traffic stream at very high speed (e. ...

Keywords: data streaming, network measurement, sampling, statistical inference, traffic matrix

14 Research session 7: data stream management: Space efficient mining of multigraph streams

Graham Cormode, S. Muthukrishnan
 June 2005 **Proceedings of the twenty-fourth ACM SIGMOD-SIGACT-SIGART symposium on Principles of database systems PODS '05**

Publisher: ACM Press

Full text available: [pdf\(340.94 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

The challenge of monitoring massive amounts of data generated by communication networks has led to the interest in data stream processing. We study streams of edges in massive communication multigraphs, defined by (source, destination) pairs. The goal is to compute properties of the underlying graph while using small space (much smaller than the number of communicants), and to avoid bias introduced because some edges may appear many times, while others are seen only once. We give results for the ...

15 Beyond bloom filters: from approximate membership checks to approximate state machines

Flavio Bonomi, Michael Mitzenmacher, Rina Panigrahy, Sushil Singh, George Varghese
 August 2006 **ACM SIGCOMM Computer Communication Review , Proceedings of the 2006 conference on Applications, technologies, architectures, and protocols for computer communications SIGCOMM '06**, Volume 36 Issue 4

Publisher: ACM Press

Full text available: [pdf\(276.74 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Many networking applications require fast state lookups in a concurrent state machine, which tracks the state of a large number of flows simultaneously. We consider the question of how to compactly represent such concurrent state machines. To achieve compactness, we consider data structures for Approximate Concurrent State Machines (ACSMs) that can return false positives, false negatives, or a "don't know" response. We describe three techniques based on Bloom filters and hashing, and evaluate them using ...

Keywords: bloom filters, network flows, state machines

16 Packet processing architectures: High-throughput sketch update on a low-power

 stream processor

Yu-Kuen Lai, Gregory T. Byrd

December 2006 **Proceedings of the 2006 ACM/IEEE symposium on Architecture for networking and communications systems ANCS '06****Publisher:** ACM PressFull text available:  [pdf\(787.77 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Sketch algorithms are widely used for many networking applications, such as identifying frequent items, top-k flows, and traffic anomalies. This paper explores the implementation of the Count-Min sketch update using Indexed SRF accesses on a SIMD stream processor (Imagine). Both the sketch data structure and the packet stream are modeled as streams, and in-lane accesses to the stream register file (SRF) support concurrent updates without explicit synchronization. The 500-MHz stream processor is ...

Keywords: SIMD, VLIW, data stream processing, network processors, sketch, stream architecture

17 Targeted Path Profiling: Lower Overhead Path Profiling for Staged Dynamic Optimization Systems

Rahul Joshi, Michael D. Bond, Craig Zilles

March 2004 **Proceedings of the international symposium on Code generation and optimization: feedback-directed and runtime optimization CGO '04****Publisher:** IEEE Computer SocietyFull text available:  [pdf\(281.40 KB\)](#) Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

In this paper, we present a technique for reducing the overhead of collecting path profiles in the context of a dynamic optimizer. The key idea to our approach, called TargetedPath Profiling (TPP), is to use an edge profile to simplify the collection of a path profile. This notion of profile-guided profiling is a natural fit for dynamic optimizers, which typically optimize the code in a series of stages. TPP is an extension to the Ball-Larus Efficient Path Profiling algorithm. Its increased efficiency ...

18 Compiler construction: an advanced courseF. L. Bauer, F. L. De Remer, M. Griffiths, U. Hill, J. J. Horning, C. H. A. Koster, W. M. McKeeman, P. C. Poole, W. M. Waite, G. Goos, J. Hartmanis
January 1974 Book**Publisher:** Springer-Verlag New York, Inc.Full text available:  [pdf\(65.62 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#)

The Advanced Course took place from March 4 to 15, 1974 and was organized by the Mathematical Institute of the Technical University of Munich and the Leibniz Computing Center of the Bavarian Academy of Sciences, in co-operation with the European Communities, sponsored by the Ministry for Research and Technology of the Federal Republic of Germany and by the European Research Office, London.

19 Continuous profiling: where have all the cycles gone? Jennifer M. Anderson, Lance M. Berc, Jeffrey Dean, Sanjay Ghemawat, Monika R. Henzinger, Shun-Tak A. Leung, Richard L. Sites, Mark T. Vandevoorde, Carl A. Waldspurger, William E. WeihlNovember 1997 **ACM Transactions on Computer Systems (TOCS)**, Volume 15 Issue 4**Publisher:** ACM PressFull text available:  [pdf\(259.35 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This article describes the Digital Continuous Profiling Infrastructure, a sampling-based profiling system designed to run continuously on production systems. The system supports multiprocessors, works on unmodified executables, and collects profiles for entire systems, including user programs, shared libraries, and the operating system kernel. Samples are collected at a high rate (over 5200 samples/sec. per 333MHz processor), yet with low overhead (1-3% slowdown for most workloads). A ...

Keywords: performance understanding, performance-monitoring hardware, profiling, program analysis

20 P2P based data management: Data currency in replicated DHTs 

 Reza Akbarinia, Esther Pacitti, Patrick Valduriez

June 2007 **Proceedings of the 2007 ACM SIGMOD international conference on Management of data SIGMOD '07**

Publisher: ACM Press

Full text available:  pdf(415.23 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Distributed Hash Tables (DHTs) provide a scalable solution for data sharing in P2P systems. To ensure high data availability, DHTs typically rely on data replication, yet without data currency guarantees. Supporting data currency in replicated DHTs is difficult as it requires the ability to return a current replica despite peers leaving the network or concurrent updates. In this paper, we give a complete solution to this problem. We propose an Update Management Service (UMS) to deal with data ...

Keywords: data currency, data dvaliability, data replication, distributed hash table (DHT), peer-to-peer

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 Day : Tuesday
 Date: 7/3/2007
 Time: 15:57:00
Application Number InformationApplication Number: **10/021874****Assignments**Filing or 371(c) Date: **12/17/2001** eDanEffective Date: **12/17/2001**Application Received: **12/20/2001**Pat. Num./Pub. Num: **/20030112976**Issue Date: **00/00/0000**Date of Abandonment: **00/00/0000**Attorney Docket Number: **PA000310**Status: **121 /APPEAL BRIEF (OR SUPPLEMENTAL BRIEF)****ENTERED AND FORWARDED TO EXAMINER**Confirmation Number: **2739**Examiner Number: **80928 / POWERS, WILLIAM**Group Art Unit: **2134** **IFW Madras**Class/Subclass: **380/270.000**Lost Case: **NO**

Interference Number:

Unmatched Petition: **NO**L&R Code: Secrecy Code:**1**Third Level Review: **YES**Secrecy Order: **NO**Status Date: **04/30/2007**Title of Invention: **SECURE GENERATION OF TEMPORARY MOBILE STATION IDENTIFIERS**

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